

In the Claims:

Claims 1 to 54 (Canceled).

1 55. (Currently amended) A wing with a changeable wing profile,  
2 wherein the wing is bounded by a wing leading edge, a wing  
3 trailing edge, and a wing outboard end edge that extends in  
4 a wing chord direction from the wing leading edge to the  
5 wing trailing edge, and wherein the wing comprising  
6 comprises a leading edge region along the wing leading edge  
7 and a trailing edge region along the wing trailing edge  
8 opposite one another with respect to a wing chord  
9 direction, a first cover skin and a second cover skin  
10 spaced apart from one another by spars therebetween, a wing  
11 tip region that is arranged at an outboard end of the wing  
12 with respect to a wingspan direction and that is bounded by  
13 the wing outboard end edge and the wing trailing edge, and  
14 a flexible region by which the wing tip region is connected  
15 with a remainder main wing body of the wing and by which  
16 the wing profile of the flexible region is adjustable by  
17 changing a curvature or camber thereof about at least one  
18 curvature axis extending essentially perpendicularly to the  
19 leading edge region and obliquely non-parallel relative to  
20 the wing chord direction in a direction that includes both  
21 a first component in the wing chord direction and a second  
22 component in the wingspan direction,  
23 characterized in that

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24 the flexible region comprises several longitudinally  
25 extending torsion boxes that are arranged next to one  
26 another and that are each respectively formed of the first  
27 cover skin, the second cover skin and at least one of the  
28 spars, and further comprising an adjusting mechanism  
29 adapted to change a shape of the torsion boxes and  
30 therewith change the curvature or camber of the wing  
31 profile of the flexible region in response to a  
32 corresponding control signal,

33 wherein the wing tip region comprises an end piece  
34 arranged and adapted to permit a compensation of a mutual  
35 relative sliding displacement of the first cover skin  
36 relative to the second cover skin with ~~[[a]]~~ the change of  
37 ~~[[a]]~~ the curvature or camber of the flexible region due to  
38 the change of the shape of the torsion ~~boxes~~ boxes,

39 wherein the flexible region extends from the leading  
40 edge region to the trailing edge region of the wing and  
41 between the main wing body and the wing tip region, and

42 wherein the leading edge region extends with a  
43 positive oblique sweepback angle relative to the wing chord  
44 direction, and the flexible region is arranged with the  
45 spars thereof extending longitudinally essentially  
46 perpendicularly to the leading edge region, and angled  
47 obliquely non-parallel to the wing outboard end edge and  
48 the wing chord direction.

1 56. (Previously presented) The wing according to claim 55,  
2 characterized in that the second cover skin is slidably  
3 supported against the end piece, and further comprising a  
4 fastening arrangement by which the second cover skin is  
5 held onto the end piece while allowing a sliding  
6 displacement of the second cover skin relative to the end  
7 piece.

Claims 57 and 58 (Canceled).

1 59. (Previously presented) The wing according claim 55,  
2 characterized in that, in the flexible region the camber of  
3 the wing is adjustable while changing the curvature of the  
4 first cover skin and of the second cover skin.

1 60. (Previously presented) The wing according to claim 55,  
2 characterized in that the adjusting mechanism comprises at  
3 least one vertebra body with a transmission element that is  
4 connected via a pivot joint with the first cover skin, and  
5 that is connected via a connection location to a drive line  
6 which has a length that is changeable in response to the  
7 control signal, wherein the connection location is  
8 vertically spaced apart from the pivot joint, and due to a  
9 change of the length of the drive line the drive line is  
10 adapted to cause a rotation of the at least one vertebra  
11 body so as to cause a change of the shape of the torsion  
12 boxes and therewith of the wing profile.

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1 61. (Previously presented) The wing according to claim 60,  
2 characterized in that the at least one vertebra body  
3 comprises several vertebra bodies arranged one behind  
4 another, and all of the vertebra bodies are connected  
5 respectively with the one drive line.

1 62. (Previously presented) The wing according to claim 60,  
2 characterized in that the at least one vertebra body and  
3 the at least one drive line are arranged within the torsion  
4 boxes.

1 63. (Previously presented) The wing according to claim 60,  
2 characterized in that the at least one vertebra body and  
3 the at least one drive line are arranged outside of the  
4 torsion boxes.

1 64. (Previously presented) The wing according to claim 60,  
2 characterized in that the pivot joint is an elastic joint,  
3 by which each said transmission element is connected via  
4 elastic connections with the first cover skin and with a  
5 respective one of the spars.

1 65. (Previously presented) The wing according to claim 55,  
2 characterized in that the flexible region comprises box  
3 elements elongated in a longitudinal direction and forming  
4 the torsion boxes, which are jointedly connected to one

5 another on their longitudinal sides in a prescribed degree  
6 via joint regions and are provided between the first cover  
7 skin and the second cover skin, whereby the box elements  
8 each respectively comprise a transmission region extending  
9 perpendicularly to the longitudinal direction of the box  
10 element and connected with the first cover skin, and a  
11 connection region spaced apart from the transmission region  
12 in a vertical direction, and wherein the adjusting  
13 mechanism is coupled with the respective connection region  
14 of the respective box elements and is adapted to move the  
15 box elements about the joint regions thereby causing a  
16 change of the wing profile in response to the corresponding  
17 control signal.

1 66. (Previously presented) The wing according to claim 65,  
2 characterized in that the box elements each respectively  
3 have an essentially triangular basic shape in  
4 cross-section, whereby the transmission region is formed by  
5 a baseline of the triangular basic shape and the connection  
6 region is formed by a corner point of the triangular basic  
7 shape lying opposite the baseline.

1 67. (Previously presented) The wing according to claim 65,  
2 characterized in that the adjusting mechanism comprises a  
3 drive line which has a length that is changeable and which  
4 is coupled with the connection regions of the box elements,  
5 and due to a change of the length of the drive line the

6 drive line is adapted to cause a rotation of the box  
7 elements so as to cause a change of the shape of the wing  
8 profile.

1 68. (Previously presented) The wing according to claim 65,  
2 characterized in that the box elements are arranged one  
3 behind another, and are respectively coupled with a drive  
4 line.

1 69. (Previously presented) The wing according to claim 65,  
2 further comprising pivot joints that are arranged and  
3 adapted to permit and compensate a relative motion between  
4 the first cover skin and the box elements, and that couple  
5 the transmission regions of the box elements with the first  
6 cover skin.

1 70. (Previously presented) The wing according to claim 69,  
2 characterized in that at least one of the joint regions or  
3 the pivot joints comprise elastic joint elements.

1 71. (Previously presented) The wing according to claim 69,  
2 characterized in that at least one of the joint regions or  
3 the pivot joints comprise flexibly elastic bands.

1 72. (Previously presented) The wing according to claim 69,  
2 characterized in that the joint regions and the pivot

3 joints are respectively incorporated together in respective  
4 common joints.

1 73. (Previously presented) The wing according to claim 72,  
2 characterized in that each one of the common joints  
3 respectively comprises flexibly elastic bands that  
4 respectively extend in extension of shanks of the box  
5 elements, and that are secured at a first end thereof to  
6 the box elements at one side thereof, and that cross over  
7 one another, and wherein a second end of the flexibly  
8 elastic bands is secured on the first cover skin of the  
9 wing.

1 74. (Previously presented) The wing according to claim 73,  
2 further comprising a filler piece consisting of an elastic  
3 material provided in a space bounded by the first cover  
4 skin and the flexibly elastic bands that cross one another.

1 75. (Currently amended) The wing according to claim 65, wherein  
2 a respective one of the spars comprise of the flexible  
3 region respectively comprises a spar element extending in  
4 a direction from the first cover skin to the second cover  
5 skin and extending with a longitudinal extension direction  
6 of the spar element parallel to the longitudinal direction  
7 of the box elements, and wherein a first end of the spar  
8 element is secured via a first jointed connection directly  
9 or indirectly to the first cover skin and a second end of

10 the spar element opposite the first end is connected via a  
11 second jointed connection directly or indirectly to the  
12 second cover skin.

1 76. (Previously presented) The wing according to claim 75,  
2 characterized in that at least one of the first jointed  
3 connection or the second jointed connection comprises  
4 elastic bands.

1 77. (Previously presented) The wing according to claim 65,  
2 further comprising an elastic band that couples the drive  
3 line with the connection region of a respective one of the  
4 box elements.

1 78. (Previously presented) The wing according to claim 65,  
2 further comprising a spacing holder provided between the  
3 first cover skin and the second cover skin, by which  
4 spacing holder the cover skins are held at a prescribed  
5 spacing distance apart from one another and a relative  
6 motion between the cover skins is permitted with changing  
7 of the wing profile.

1 79. (Previously presented) The wing according to claim 78,  
2 characterized in that the spacing holder includes a roll  
3 shaped element and a flexible band arrangement that is  
4 arranged and adapted to guide a rolling motion of the roll  
5 shaped element between the first cover skin and the second



6 cover skin with a relative motion between the first and  
7 second cover skins.

1 80. (Previously presented) The wing according to claim 79,  
2 characterized in that the flexible band arrangement  
3 includes at least one flexible band that is guided around  
4 the roll shaped element and that has first and second ends  
5 thereof secured on the first or second cover skin  
6 respectively.

1 81. (Previously presented) The wing according to claim 80,  
2 characterized in that the roll shaped element is centrally  
3 divided by a central passage, and in that the flexible band  
4 extends through the central passage of the roll shaped  
5 element and while reversing a wrapping direction the  
6 flexible band is wrapped around the roll shaped element  
7 respectively halfway in opposite directions.

1 82. (Currently amended) A wing comprising:  
2 a leading edge, a trailing edge, and an outboard end  
3 edge that extends in a wing chord direction from said  
4 leading edge to said trailing edge;  
5 a wing body ~~including and~~ bounded between [[a]] said  
6 leading edge and [[a]] said trailing edge, wherein said  
7 wing body includes a leading edge portion along said  
8 leading edge, a trailing edge portion along said trailing

9 edge, and a main wing body portion between said leading  
10 edge portion and said trailing edge portion;

11 a wing tip portion forming an outboard end of said  
12 wing in a wingspan direction, wherein said wing tip portion  
13 is bounded by said trailing edge and by said outboard end  
14 edge; and

15 a flexible wing portion interposed between and  
16 connecting said wing tip portion and said main wing body  
17 portion, and extending from said leading edge portion to  
18 said trailing edge portion;

19 wherein:

20 said leading edge extends with a positive oblique  
21 sweepback angle relative to said wing chord direction;

22 said flexible wing portion comprises a flexible top  
23 cover skin, a flexible bottom cover skin spaced apart from  
24 said top cover skin, plural spars that extend  
25 longitudinally parallel to one another, perpendicular to  
26 said leading edge and ~~parallel to one another~~ angled  
27 obliquely non-parallel to said outboard end edge and said  
28 wing chord direction in a space between said top and bottom  
29 cover skins, and plural vertebral adjusting mechanisms that  
30 each respectively extend longitudinally in a longitudinal  
31 direction parallel to said leading edge and perpendicular  
32 to said spars;

33 each one of said vertebral adjusting mechanisms  
34 comprises plural vertebra bodies that are respectively  
35 interposed between successive ones of said spars in said  
36 longitudinal direction and that are pivotably connected to

37 one another and to said spars, and a drive line that has an  
38 actuator-driven variable length in said longitudinal  
39 direction and that is connected to said vertebra bodies, so  
40 that said vertebra bodies are respectively adapted to pivot  
41 about pivot axes extending perpendicular to said leading  
42 edge in response to a change of said variable length of  
43 said drive line whereby a camber of said flexible wing  
44 portion is variable about at least one curvature axis  
45 extending perpendicular to said leading edge and obliquely  
46 non-parallel relative to said wing chord direction, in a  
47 direction that includes a first component in said wing  
48 chord direction and a second component in said wingspan  
49 direction.

1 83. (New) The wing according to claim 82, wherein said wing tip  
2 portion has a triangular plan shape bounded by said  
3 outboard end edge, said trailing edge and said flexible  
4 wing portion, and not extending along said leading edge.

1 84. (New) The wing according to claim 82, wherein said spars  
2 extend longitudinally obliquely non-parallel and  
3 non-perpendicular to said trailing edge, and said at least  
4 one curvature axis extends obliquely non-parallel and  
5 non-perpendicular to said trailing edge.